902 may include Wi-Fi communications circuitry so that the user of the device 900 may place or initiate a call using voice over Internet Protocol (VOIP) connection, transfer data through a wireless local area network.

[0043] The device may include a transducer 918. Transducer 918 may be a speaker and/or a transducer assembly such as that described in reference to FIGS. 1-7. Transducer 918 may be an electric-to-acoustic transducer or sensor that converts an electrical signal input (e.g., an acoustic input) into a sound or vibration output. The circuitry of the speaker may be electrically connected to processor 912 and power source 910 to facilitate the speaker operations as previously discussed (e.g, diaphragm displacement, etc).

[0044] The device 900 may further include a motion sensor 904, also referred to as an inertial sensor, that may be used to detect movement of the device 900, camera circuitry 906 that implements the digital camera functionality of the device 900, and primary power source 910, such as a built in battery, as a primary power supply.

[0045] While certain aspects have been described and shown in the accompanying drawings, it is to be understood that such embodiments are merely illustrative of and not restrictive on the broad invention, and that the invention is not limited to the specific constructions and arrangements shown and described, since various other modifications may occur to those of ordinary skill in the art. The description is thus to be regarded as illustrative instead of limiting. In addition, to aid the Patent Office and any readers of any patent issued on this application in interpreting the claims appended hereto, applicants wish to note that they do not intend any of the appended claims or claim elements to invoke 35 U.S.C. 112(f) unless the words "means for" or "step for" are explicitly used in the particular claim.

What is claimed is:

1. A transducer assembly comprising:

a stiffener plate having a first side and a second side;

a voice coil coupled to the second side of the stiffener plate;

a magnet assembly positioned along the second side of the stiffener plate, the magnet assembly operable to produce a magnetic field that causes a movement of the magnet assembly relative to the voice coil; and

leaf spring suspending the magnet assembly from the stiffener plate, the leaf spring having a triangular cross-sectional shape defined by a first extension member and a second extension member that meet at a joint.

2. The transducer assembly of claim 1 wherein the first extension member is attached to the second side of the stiffener plate, the second extension member is attached to a bottom side of the magnet assembly, wherein the bottom side faces away from second side of the stiffener plate, and the joint is positioned around a perimeter of the magnet assembly and allows the first extension member and the second extension member to move toward or away from one another.

3. The transducer assembly of claim 1 wherein the magnet assembly comprises a polygon shape having a number of sides, and the leaf spring is positioned along one of the sides.

4. The transducer assembly of claim 1 wherein the leaf spring is one of a plurality of leaf springs symmetrically arranged around a perimeter of the magnet assembly.

5. The transducer assembly of claim 1 wherein the leaf spring is a first leaf spring, the assembly further comprises a second leaf spring, and wherein the first leaf spring is positioned around the perimeter of the magnet assembly and the second leaf spring is positioned within a center opening of the magnet assembly.

6. The transducer assembly of claim 5 wherein the second leaf spring is at an angle of from 35 degrees to 55 degrees relative to the first leaf spring.

7. The transducer assembly of claim 1 further comprising an actuating surface coupled to the first side of the stiffener plate.

8. The transducer assembly of claim 7 wherein the actuating surface comprises a wall of a device within which the transducer assembly is integrated.

9. An electronic device comprising:

an enclosure having an enclosure wall defining an actuating surface;

a stiffener plate having a first side coupled to the actuating surface and a second side;

a voice coil coupled to the second side of the stiffener plate;

a magnet assembly positioned along the second side of the stiffener plate, the magnet assembly operable to produce a magnetic field that causes a movement of the magnet assembly relative to the voice coil; and

a plurality of springs coupling the magnet assembly to the stiffener plate, wherein each spring of the plurality of springs comprises a first extension member attached to the second side of the stiffener plate, a second extension member attached to a bottom side of the magnet assembly and having a same length as the first extension member, and wherein the first extension member and the second extension member meet at a joint to form a triangle like shape, and the joint allows the first extension member and the second extension member to move toward or away from one another when the magnet assembly moves.

10. The electronic device of claim 9 wherein when the first extension member and the second extension member move away from one another, the magnet assembly and the stiffener plate move away from one another, and when the first extension and the second extension member move toward one another, the magnet assembly and the stiffener plate move toward one another, and the movement of the magnet assembly relative to the stiffener plate causes a vibration of the actuating surface.

11. The electronic device of claim 9 wherein the plurality of springs comprise a first set of springs and a second set of springs, wherein the first set of springs are arranged around a perimeter of the magnet assembly, and the second set of springs are arranged around a center opening of the magnet assembly.

12. The electronic device of claim 11 wherein the perimeter of the magnet assembly is defined by sides of the magnet assembly connected to form a polygon shape and the second set of springs are positioned along each diagonal axis of the polygon shape.

13. The electronic device of claim 11 wherein the center opening of the magnet assembly comprises a polygon shape.

14. The electronic device of claim 11 wherein each spring of the second set of springs is rotated from 35 degrees to 45 degrees relative to at least one spring of the first set of springs.

15. The electronic device of claim 9 wherein the bottom side of the magnet assembly comprises a bottom recessed region within which the second extension member is posi-